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2004/047579

We claim:

1. A method of using a shoe system having a resilient shoe insert, comprising:

5 providing a shoe 300 having a shoe insert 500 disposed inside the shoe, the shoe insert having an upper leg 506 and a lower leg 514 connected by a front end 502 with an attachment segment, the leg 506 having a concave segment 510, the upper leg 506 having an end point 520 and the lower leg 514 having an end point 522 that is separated from the end point 520 with a distance d_1 , the insert 500 having an effective length l_1 ;

10 putting a load (L) on the shoe and the insert 500; reducing the distance d_1 to a distance d_2 , the distance d_2 being shorter than the distance d_1 ; and

15 reducing the effective length l_1 to an effective length l_2 , the length l_2 extending from the contact segment 524 to the end points 520, 522.

20 2. The method according to claim 1 wherein the method further comprises extending the contact segment 524 from an outside 530 to an inside 532, the segment 524 being substantially parallel to the front end 502, the front end 502 forming an acute angle to a longitudinal axis A of the insert.

25 3. The method according to claim 2 wherein the method further comprises further compressing the end point 520 towards the end point 522 to reduce the distance d_2 to a distance d_3 that is shorter than the distance d_2 and forming a contact area 526 between the upper leg 506 and the lower leg 514.

30 4. The method according to claim 3 wherein the method further comprises extending the contact area 526 from the contact segment 524 to a separation segment 528 and shortening the

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effective length 12 to an effective length 13 at a mid-portion 529 of the segment 528, the length 13 being shorter than the length 12.

- 5 5. The method according to claim 4 wherein the method further comprises providing the insert 500 with an effective length l_{30} at the outside 530, the effective length 130 being shorter than the effective length 13 at the mid-portion 529.
- 10 6. The method according to claim 5 wherein the method further comprises providing the insert 500 with an effective length l_{31} at the inside 532, the effective length 13i being longer than the effective length 13 at the mid-portion 529.
- 15 7. The method according to claim 1 wherein the method further comprises providing the attachment point 512 with a curvature.
8. The method according to claim 1 wherein the method further comprises compressing the end point 520 towards the end point 522 until a concave upper segment 510 is in contact with a concave lower segment 518 at a contact segment 524.
- 20 9. The method according to claim 1 wherein the method further comprises providing the leg 514 with a concave segment 518.

AMENDED CLAIMS

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ART 34 AMEND

(received by the International Bureau on 29 April 2004 (29.04.04);
original claim 8 cancelled ; remaining claims unchanged (2 pages))

1. A method of using a shoe system having a resilient shoe insert, comprising:

providing a shoe (300) having a shoe insert (500) disposed inside the shoe, the shoe insert having an upper leg (506) and a lower leg (514) connected by a front end (502) with an attachment segment, the leg (506) having a concave segment (510), the upper leg (506) having an end point (520) and the lower leg (514) having an end point (522) that is separated from the end point (520) with a distance (d1), the insert (500) having an effective length (l_1);

putting a load (L) on the shoe and the insert (500);
compressing the end point (520) towards the end point (522) until a concave upper segment (510) is in contact with a concave lower segment (518) at a contact segment (524) to progressively increase a stiffness of the legs (506, 514) wherein the contact segment (524) remote from an attachment point (512) at the front end (502) so that a loop is formed between the attachment point (512) and the contact segment (524), the contact segment (524) being remote from both the end points (520, 522); and

the contact segment (524) reducing the effective length (l_1) to an effective length (l_2), the length (l_2) extending from the contact segment (524) to the end points (520, 522).

2. The method according to claim 1 wherein the method further comprises extending the contact segment (524) from an outside (530) to an inside (532), the segment (524) being substantially parallel to the front end (502), the front end (502) forming an acute angle to a longitudinal axis (A) of the insert.

3. The method according to claim 2 wherein the method further comprises further compressing the end point (520) towards the end point (522) to reduce the distance (d2) to a distance (d3) that is shorter than the distance (d2) and forming a contact area (526) between the upper leg (506) and the lower leg (514).

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4. The method according to claim 3 wherein the method further comprises extending the contact area (526) from the contact segment (524) to a separation segment (528) and shortening the effective length (l_2) to an effective length (l_3) at a mid-portion (529) of the segment (528), the length (l_3) being shorter than the length (l_2).

5. The method according to claim 4 wherein the method further comprises providing the insert (500) with an effective length (l_{30}) at the outside (530), the effective length (l_{30}) being shorter than the effective length (l_3) at the mid-portion (529).

6. The method according to claim 5 wherein the method further comprises providing the insert (500) with an effective length (l_{31}) at the inside (532), the effective length (l_{31}) being longer than the effective length (l_3) at the mid-portion (529).

7. The method according to claim 1 wherein the method further comprises providing the attachment point (512) with a curvature.

8. (Canceled).

9. The method according to claim 1 wherein the method further comprises providing the leg (514) with a concave segment (518).